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## पाइल ड्राइविंग हथौड़ा — विशिष्टि

( पहला पुनरीक्षण )

## Pile Driving Hammer — Specification

( *First Revision* )

ICS 91.220

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भारतीय मानक व्यूरो  
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May 2023

Price Group 4

## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Construction Plant and Machinery Sectional Committee had been approved by the Mechanical Engineering Divisional Council.

This standard was first published in 1972. This standard is being revised again to keep pace with the latest technological developments and international practices. In this revision, the following major changes have been made:

- a) A reference clause has been added mentioning the latest version of all the referred standards;
- b) New clauses 6.1 and 6.2 on marking has been added; and
- c) Editorial corrections have been done.

This standard has been prepared to assist manufacturers and designers in the production of pile hammers to certain standardized parameters. The object is to keep weights of hammers to a limited range and to standardize weight interval and stroke and thus facilitate their use with piling rigs and piling attachments of different plants. Standard sizes of hammers will assist the user in determining the type and size of hammer he may procure to plan his project accordingly. This will further assist in early deliveries and replacements. The designers and manufacturers may use their ingenuity to evolve improved designs (within the sizes given) which may prove more economical in the long run.

The composition of the Committee responsible for the formulation of this standard is listed in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*  
**PILE DRIVING HAMMER — SPECIFICATION**  
*(First Revision)*

## 1 SCOPE

This Indian Standard specifies the weights and strokes for different types of pile hammers, the two important parameters on which the energy of the hammer depends.

## 2 REFERENCES

The standard listed below contains provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standard indicated below:

<i>IS No.</i>	<i>Title</i>
IS 6427 : 1972	Glossary of terms relating to pile driving equipment

## 3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 6427 shall apply.

## 4 CLASSIFICATION

Pile hammers shall be classified as given in Table 1.

## 5 SIZES

The recommended sizes (weight of ram or the striking part) and stroke of different types of hammers shall be as given in Table 2.

**Table 1 Classification of Pile Driving Hammers**  
*(Clause 4)*

<b>Sl No.</b> (1)	<b>Class</b> (2)	<b>Weight (kg)</b> (3)
i)	Light hammers	Up to 500
ii)	Medium hammers	Over 500 and up to 2 500
iii)	Heavy hammers	Over 2 500

**Table 2 Sizes (Weight of Ram or the Striking Part) and Stroke of Different Types of Hammers**  
*(Clause 5)*

<b>Sl No.</b> (1)	<b>Type of Hammer</b> (2)	<b>Light</b> (Up to 500 kg) (3)	<b>Medium</b> (Over 500 kg Up to 2 500 kg) (4)	<b>Heavy</b> (Over 2 500 kg) (5)
i)	Drop hammer	250 to 500 kg at multiples of 125	750 kg to 2 500 kg at multiples of 250	2 750 kg to 4 500 kg at multiples of 250
ii)	Single acting capable of working on steam or air at 5.5 kg/cm <sup>2</sup> at the hammer	a) 25 kg to 100 kg at multiples of 25 kg at maximum stroke of 20 cm  b) 100 kg to 500 kg at multiples of 100 kg at maximum stroke of 40 cm	750 kg to 2 500 kg at multiples of 250, at maximum stroke of 90 cm	3 000 kg to 7 500 kg at multiples of 500 kg at maximum stroke of 120 cm

Table 2 (Concluded)

Sl No.	Type of Hammer	Light	Medium	Heavy
		(Up to 500 kg)	(Over 500 kg Up to 2 500 kg)	(Over 2 500 kg)
(1)	(2)	(3)	(4)	(5)
iii)	Double acting capable of working on steam or air at 5.5 kg/cm <sup>2</sup> at the hammer	a) 25 kg to 100 kg at multiples of 25 kg at maximum stroke of 25 cm  b) 100 kg to 500 kg at multiples of 100 kg at maximum stroke of 25 cm	750 kg to 2 500 kg at multiples of 500 kg at maximum stroke of 45 cm	—
iv)	Diesel hammer	500 kg at maximum stroke of 250 cm	Over 500 kg up to 2 500 kg at multiples of 500 kg at maximum stroke of 250 cm	—

## 6 MARKING

### 6.1 Rating Plate

Each hammer shall have a rating plate firmly attached to some part which will not be easily removable. The plate shall have clearly marked on it the following information:

- a) Manufacturer's name and address;
- b) Month and year of manufacture;
- c) Machine name and model number; and
- d) Hammer size.

### 6.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

## ANNEX A

(Foreword)

## COMMITTEE COMPOSITION

Construction Plant and Machinery Sectional Committee, MED 18

<i>Organization</i>	<i>Representative(s)</i>
Directorate General of Quality Assurance, Ministry of Defence, New Delhi	BRIG P. K. SHRIVASTAVA ( <i>Chairperson</i> )
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Directorate General Border Roads, New Delhi	COL AMIT BHARDWAJ
Directorate General of Quality Assurance, Ministry of Defense, New Delhi	COL RAVI LOGANATHAN LT COL S. TALEWAR ( <i>Alternate</i> )

<i>Organization</i>	<i>Representative(s)</i>
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<i>Organization</i>	<i>Representative(s)</i>
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	<i>Member Secretary</i> SHRI LOKRAJ MEENA SCIENTIST 'B'/ASSISTANT DIRECTOR (MECHANICAL ENGINEERING), BIS





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This Indian Standard has been developed from Doc No.: MED 18 (20127).

### **Amendments Issued Since Publication**

<b>Amend No.</b>	<b>Date of Issue</b>	<b>Text Affected</b>

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